



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,985	10/24/2003	Peter Wayte	126987/11915 (21635-0112)	1740
31450 7590 01/04/2007 MCNEES WALLACE & NURICK LLC 100 PINE STREET P.O. BOX 1166 HARRISBURG, PA 17108-1166			EXAMINER ROE, JESSEE RANDALL	
			ART UNIT	PAPER NUMBER
			1742	

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/04/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary	Application No.	Applicant(s)	
	10/692,985	WAYTE ET AL.	
	Examiner	Art Unit	
	Jessee Roe	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 October 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18, and 21-22 is/are pending in the application.
- 4a) Of the above claim(s) 2 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3-10, 12-18 and 21-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

Claims Status

Claims 1, 3-10, 12-18 and 21-22 remain for examination wherein claims 1 and 10 are amended; claims 19-20 are canceled; claims 21-22 are new; and claims 2 and 11 are withdrawn from consideration.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-7, 10, 12-16, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (0002) in view of Beier (US 2001/0048019), Woodfield (US 2004/0089380), the ASM Handbook, Volume 4, and the website disclosure of the Titanium Metals Corporation found at www.timet.com/timetal6-4frame.html as archived by web.archive.org having been available to the public before December 23, 2001.

Claims 1,3-7, 10 and 12-16 are rejected on the same grounds as stated in the Office Action of 20 July 2006.

In regards to claims 21 and 22, Woodfield ('380) discloses a final forging (machining) that would decrease the thickness from 13 inches (end of second forging) to about 6 inches (end of fourth forging). Therefore, it would be expected that the alpha-case that was at the surface initially would be removed during this final machining.

Claims 8-9 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over the admitted prior art (0002) in view of Beier (US 2001/0048019), Woodfield (US 2004/0089380), the ASM Handbook, and the website disclosure of the Titanium Metals Corporation as applied to claims 1 and 10 above, and further in view of Bewley (US 6,370,956).

Claims 8-9 and 17-18 are rejected on the same grounds as stated in the Office Action of 20 July 2006.

Response to Arguments

Applicant's arguments filed 20 October 2006 have been fully considered but they are not persuasive.

In regards to the admitted prior art [0002], the Applicant indicates that "Ti64 alloy, having a nominal composition in weight percent of 6 percent aluminum, 4 percent vanadium, 0.2 percent oxygen, balance titanium and impurities, is one of the most widely used titanium –base alloys". A statement by an applicant during prosecution identifying the work of another as "prior art" is an admission that that work is available as prior art against the claims, regardless of whether the admitted prior art would otherwise qualify as prior art under the statutory categories of 35 U.S.C. 102. *Riverwood Int'l Corp. v. R.A. Jones & Co.*, 324 F.3d 1346, 1354, 66 USPQ2d 1331, 1337 (Fed Cir. 2003). However, even if labeled as "prior art," the work of the same inventive entity may not be considered prior art against the claims unless it falls under one of the statutory categories. *Id.*; see also *Reading & Bates Construction Co. v. Baker Energy Resources Corp.*, 748 F.2d 645, 650, 223 USPQ 1168, 1172 (Fed. Cir. 1984) ("[W]here the inventor

Art Unit: 1742

continues to improve upon his own work product, his foundational work product should not, without a statutory basis, be treated as prior art solely because he admits knowledge of his own work. It is common sense that an inventor, regardless of an admission, has knowledge of his own work.”). Consequently, the examiner must determine whether the subject matter identified as “prior art” is applicant’s own work, or the work of another. In the absence of another credible explanation, examiners should treat such subject matter as the work of another. See MPEP 2129 I.

In regards to the website disclosure by the Titanium Metals Corporation, the Examiner has researched the method of obtaining the website information of www.timet.com/timetal6-4frame.html from www.web.archive.org as indicated by the previous Examiner. The Examiner has accessed the website and finds that the date at which the website was created was October 22, 1999 and would have been publicly available on December 23, 2001. A PDF, time stamped hard copy of the pertinent information with regards to this case is again provided for the Applicant.

In response to applicant’s argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In regards to the combination of the admitted prior art [0002] with Beier (US 2001/0048019), Woodfield (US

Art Unit: 1742

2004/0089380), the ASM Handbook, Volume 4, and the website disclosure of the Titanium Metals Corporation found at www.timet.com/timetal6-4frame.html as archived by www.web.archive.org, the instant invention would be a process for fabricating a forged titanium alloy article comprising providing a workpiece, forging the workpiece, heat treating the workpiece, quenching the workpiece, aging the workpiece, and final machining the workpiece. The admitted prior art [0002] would provide a titanium alloy workpiece having a nominal composition in weight percent of 6 percent aluminum, 4 percent vanadium, 0.2 percent oxygen, balance titanium and impurities, forging the workpiece, wherein the thickness of the workpiece would be greater than 2-1/4 inches. The website disclosure of the Titanium Metals Corporation found at www.timet.com/timetal6-4frame.html as archived by www.web.archive.org teach, in the same field of endeavor, heat treating titanium articles at a temperature from between 50 to 250°F below the beta transus temperature, water quenching the titanium article, and aging the titanium article at a temperature from 900 to 1100°F. The website disclosure of the Titanium Metals Corporation found at www.timet.com/timetal6-4frame.html as archived by www.web.archive.org does not specify a reason for conducting such procedures, however, the motivation in conducting such procedures would be found in the ASM Handbook Volume 4, page 916, 3rd column, line 46 to page 917, 1st column, line 2, which teaches an analogous heat treating method in order to provide strength to titanium alloys while maintaining ductility. The admitted prior art (0002) in view of the website disclosure of the Titanium Metals Corporation found at www.timet.com/timetal6-4frame.html as archived by www.web.archive.org and the ASM Handbook Volume 4,

Art Unit: 1742

page 916, 3rd column, line 46 to page 917, 1st column, line 2 does not specify quenching to room temperature. However, Beier (US 2001/0048019) teaches quenching alloys such as titanium alloys [0007 and 0010] to room temperature in order to maximize the retention of alloying elements in solid solution prior to aging. The admitted prior art (0002) in view of the website disclosure of the Titanium Metals Corporation found at www.timet.com/timetal6-4frame.html as archived by www.web.archive.org, the ASM Handbook Volume 4, pages 916-917, and Beier (US 2001/0048019) does not specify final machining the forged titanium alloy. However, Woodfield (US 2004/0089380), teaches (0012) final machining a forged titanium alloy to provide a final configuration and dimension of a titanium alloy gas turbine component. Therefore, the combination of the admitted prior art (0002) with www.timet.com/timetal6-4frame.html as archived by www.web.archive.org, the ASM Handbook Volume 4, pages 916-917, Beier (US 2001/0048019), and Woodfield (US 2004/0089380) would be obvious for the reason as stated in the Office Action of 20 July 2006.

In regards to the combination of the admitted prior art (0002) view of Beier (US 2001/0048019), Woodfield (US 2004/0089380), the ASM Handbook Volume 4, and the website disclosure of the Titanium Metals Corporation found at www.timet.com/timetal6-4frame.html as archived by www.web.archive.org, and further in view of Bewley (US 6,370,956), the admitted prior art (0002) in view of Beier (US 2001/0048019), Woodfield (US 2004/0089380), the ASM Handbook Volume 4, and the website disclosure found at www.timet.com/timetal6-4frame.html as archived by www.web.archive.org do not teach a step of ultrasonically inspecting the workpiece after

Art Unit: 1742

the step of forging the workpiece and before the step of heat treating. However, Bewley ('956) teaches a step of ultrasonically inspecting the workpiece after the step of forging the workpiece and before the step of heat treating.. In summary, there are four ultrasonically inspected samples. These samples include a conventional billet (no treatment); a forged version of the conventional billet; a uniform fine grain UFG billet (a conventional billet that has been forged into a shape (col. 5, lines 30-43)); and a forging of the UFG billet. The forged version of the UFG billet would be characterized by press forging at 900°C (heat treatment) (col. 6, lines 1-14). It would be obvious to one of ordinary skill for the reasons as stated in the Office Action of 20 July 2006 that this would essentially be a four stage process wherein a fine grain UFG billet (a conventional billet that has been forged into a shape (col. 5, lines 30-43) would be press forged again at 900°C (heat treatment) and that ultrasonic inspection would occur after each processing stage (col. 5, lines 60-67) including after the step of the conventional billet being forged into a shape (fine grain UFG billet) and before the forging of the UFG billet, which would include a heat treatment of 900°C.

In the absence of evidence providing the criticality of a titanium alloy with a composition of 6 weight percent aluminum, 4 weight percent vanadium, and 0.2 weight percent oxygen to this process, the Examiner has relied upon references that comprise the general treatment of titanium alloys. Evidence of the criticality of this particular titanium alloy with this process is requested by the Examiner.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jessee Roe whose telephone number is (571) 272-5938. The examiner can normally be reached on Monday-Friday 8 AM - 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on (571) 272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1742

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JR

ROY KANG
SUPERVISORY PATENT EXAMINER
TECHNICAL CENTER